

Work Order ID 148061

June 22, 2016 11:00:50 AM

148061

*Ship July 8 or
Sooner.*

Page 1

Item ID: D130-701-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Conversion EC130
 Start Date: 6/22/2016 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/6/2016 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: SH Date: 6/22/15 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN D130-701	<u>DE</u>								
100	Document Control	JUN 23 2016 0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy blue file and type labels per PPP D130-701-011 CHG005								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
150	QC4- 100% Inspect kits for completeness	0.00							
150									
QC	Memo	0.00							
Quality Control									

MJ 16-06-23

DAS
28
9-89
JUL 08 2016

JUN 27 2016
DAS
27
9-89

JUL 08 2016
DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐							

June 22, 2016 11:00:50 AM

148061

Page 2

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Conversion EC130

Start Date: 6/22/2016 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 7/6/2016 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
---------	--------	-----------

Accept Qty	Reject Qty	Reject Number	Insp. Stamp

160

0.00

160

Packaging

0.00

Packaging

Memo

Packaging

Identify and pack for shipping as per PPP D130-701-011

Location:

PPP Rev:

DAS	DAS
<u>28</u>	<u>27</u>
9-89	9-80

JUL 08 2016

170

QC21- Final Inspection - Work Order Release

0,00

170

QC

Memo

0.00

Quality Control

**DAS
21
9-89**

JUL 08 2016

**DAS
21
9-89**

JUL 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

June 22, 2016 11:00:59 AM

Work Order ID: 148061

148061

Parent Item: D130-701-011

D130-701-011

Parent Item Name: Conversion EC130

Start Date: 6/22/2016**Required Date:** 7/6/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 10-04-19 JLM VERIFIED BY:DD IPP
Rev:B 11.01.31 now @ chg003 DD verified by:ec IPP Rev:C
11.03.21 now @ chg004 DD verified by:ec IPP Rev:D 11.04.27 per
ecn 11-554 DD verified by:ec

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4037-1 *D4037-1* Aft Crossbeam		Manufactured	No			110	Each	2.0000	1	1		DAS 6 9-89	DAS 27 9-89
	DAS 28 9-89			<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST471		2							
				144131		2							
D4037-3 *D4037-3* Fwd Crossbeam		Manufactured	No			110	Each	2.0000	1	1		DAS 6 9-89	DAS 27 9-89
	DAS 28 9-89			<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST471		2							
				144132		2							
D4038-041 *D4038-041* Angle Assy Fwd LH	DAS 28 9-89	Manufactured	No			110	Each	0.0000	1	1		DAS 6 9-89	DAS 27 9-89
D4038-042 *D4038-042* Angle Assy Fwd RH	DAS 28 9-89	Manufactured	No			110	Each	0.0000	1	1		DAS 6 9-89	DAS 27 9-89
D4038-043 *D4038-043* Angle Assy Aft LH	DAS 28 9-89	Manufactured	No			110	Each	0.0000	1	1		DAS 6 9-89	DAS 27 9-89
D4038-044 *D4038-044* Angle Assy Aft RH	DAS 28 9-89	Manufactured	No			110	Each	0.0000	1	1		DAS 6 9-89	DAS 27 9-89

Picklist Print

June 22, 2016 11:00:59 AM

Page 2

Work Order ID: 148061

148061

Parent Item: D130-701-011

D130-701-011

Parent Item Name: Conversion EC130

Start Date: 6/22/2016

Required Date: 7/6/2016

Start Qty: 1.00

Required Qty: 1.00

D4039-041 Manufactured No 110 Each 2.0000 1 1

D4039-041

Fwd Bracket Assembly

DAS
28
9-89

Location Loc Qty Loc Code

ST476

2

144128

2

D4039-043 Manufactured No 110 Each 2.0000 1 1

D4039-043

Aft Bracket Assembly

DAS
28
9-89

Location Loc Qty Loc Code

ST477

2

144233

2

D4040-1 Manufactured No 110 Each 19.0000 4 4

D4040-1

Radius Block

DAS
28
9-89

Location Loc Qty Loc Code

st073

19

144123

19

D4090-5 Manufactured No 110 Each 5.0000 1 1

D4090-5

Placard

DAS
28
9-89

Location Loc Qty Loc Code

ST078

5

132557

5

D4090-2 qty 1 Batch: 148444

D4090-3 qty 1 Batch: 148445

June 22, 2016 11:00:59 AM

Shop Packet Print

Page 2

Picklist Print

June 22, 2016 11:00:59 AM

Page 3

Work Order ID: 148061

148061

Parent Item: D130-701-011

D130-701-011

Parent Item Name: Conversion EC130

Start Date: 6/22/2016

Required Date: 7/6/2016

Start Qty: 1.00

Required Qty: 1.00

AN5-10A Purchased No 110 Each 52.0000 16 16

AN5-10A

Bolt

DAS
28
9-89

Location	Loc Qty	Loc Code
GA	30	
122800	30	
ST337	20	
122800	20	16
ST338	2	
m134634	2	

MS20002C5 Purchased No 110 Each 52.0000 8 8

MS20002C5

Washer

DAS
28
9-89

Location	Loc Qty	Loc Code
ST314	52	
m132680	52	8

MS20002C6 Purchased No 110 Each 104.0000 12 12

MS20002C6

WASHER

Location	Loc Qty	Loc Code
ST314	104	
m132823	4	4
m134754	100	8

DAS
28
9-89

DAS
6
27
9-89
JUN 27 2016

Picklist Print

June 22, 2016 11:00:59 AM

Page 4

Work Order ID: 148061

148061

Parent Item: D130-701-011

D130-701-011

Parent Item Name: Conversion EC130

Start Date: 6/22/2016

Required Date: 7/6/2016

Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

110

Each

517.0000

24

24

MS21042I 5

Nut

**

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

GA

95

m127813

95

OVER007

250

m134509

100

m134955

150

ST303

172

m134055

6

m134762

166

24

MS21042L6

Purchased

No

110

Each

201.0000

12

12

MS21042I 6

Nut

**

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

OVER007

100

m134955

100

ST303

101

m133938

6

m134055

5

m134676

90

12

MS21250-05032

Purchased

No

110

Each

1.0000

4

4

MS21250-05032

Bolt

**

135065

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

ST294

1

m134530

1

MS21250-05038

Purchased

No

110

Each

0.0000

4

4

MS21250-05038

Bolt

**

135065

DAS

6

9-89

DAS

27

9-89

JUN 27 2016

June 22, 2016 11:00:59 AM

Shop Packet Print

Page 4

Picklist Print

June 22, 2016 11:00:59 AM

Page 5

Work Order ID: 148061

148061

Parent Item: D130-701-011

D130-701-011

Parent Item Name: Conversion EC130

Start Date: 6/22/2016

Required Date: 7/6/2016

Start Qty: 1.00

Required Qty: 1.00

MS21250-06018

Purchased

No

110

Each

9.0000

12

12

MS21250-06018

BOLT

**

135065x3

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

over006

9

m134654

9

9

NAS1149D0563J

Purchased

No

110

Each

857.0000

40

40

NAS1149D0563.J

Washer

**

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

GA

231

m125807

2

m133769

229

ST263

527

m134497

527

ST269

99

m128257

99

NAS1149D0663J

Purchased

No

110

Each

524.0000

12

12

NAS1149D0663.J

Washer

**

DAS

6

9-89

DAS

27

9-89

Location

Loc Qty

Loc Code

ST260

227

M131618

227

ST263

242

M133134

89

M133769

12

M134634

141

ST269

55

M126334

55

12

DAS

28

9-89

JUN 27 2016

June 22, 2016 11:00:59 AM

Shop Packet Print

Page 5

Work Order ID 148061

June 22, 2016 11:00:50 AM

148061

Page 1

Item ID: D130-701-011

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Conversion EC130

Stop ***NS2***

Start Date: 6/22/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/6/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: SH Date: 6/22/15 Tooling:

Run Start ***NR1***

QC: Date: SPC (Y/N):

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN D130-701	D								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy blue file and type labels per PPP D130-701-011 CHG005								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
150	QC4- 100% Inspect kits for completeness	0.00							
150									
QC	Memo	0.00							
Quality Control									

JUN 23 2016

JUN 23 2016

MLJ

Qty -041	Qty -043	Qty -011	Qty -013	Part Number	Description
	1	1		*D4090-3	PLACARD (ON BASKET LID)
	1	1	1	D4090-5	PLACARD
2	2			*AN3-16A	BOLT
2	2			AN4-12A	BOLT
1	1			*AN4-22A	BOLT
1	1			*AN4-24A	BOLT
3 (2)	3 (2)			+AN4-7A	BOLT
4	16	16	16	AN5-10A	BOLT
4	4			*AN5-17A	BOLT
2				AN5-23A	BOLT
4	4			*AN970-4	WASHER
	8	8	8	MS20002C5	WASHER
	12	12		MS20002C6	WASHER
2	2			*MS20600AD4W3	RIVET
2	2			*MS21042L3	NUT (OR MS21042-3)
7 (4)	7 (4)			+MS21042L4	NUT (OR MS21042-4)
10 (4)	28 (4)	24	24	+MS21042L5	NUT (OR MS21042-5)
	12	12		MS21042L6	NUT (OR MS21042-6)
	4	4	4	MS21250-05032	BOLT
	4	4	4	MS21250-05038	BOLT
	12	12		MS21250-06018	BOLT
2	2			*NAS1149DN832J	WASHER (AN960JD8)
2	2			*NAS1149D0416J	WASHER (AN960JD416L)
7 (2)	7 (2)			+NAS1149D0463J	WASHER (AN960JD416)
16 (4)	44 (4)	40	40	+NAS1149D0563J	WASHER (AN960JD516)
	12	12		NAS1149D0663J	WASHER (AN960JD616)

* Pre-assembled prior to shipping

+ Quantity in () preassembled prior to shipping

• COPYRIGHT © 2002 BY DART AEROSPACE LTD •

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: E

Date: 15.04.22

REFERENCE ONLY**4. WEIGHT AND BALANCE**

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D130-701-041 (LH installation)	120 lb 54 kg	- 47.4 in - 1.20 m	- 5688 in-lb - 64.8 m-kg	133.9 in 3.40 m	16068 in-lb 183.6 m-kg
D130-701-041 (RH installation)	120 lb 54 kg	+ 47.4 in + 1.20 m	+ 5688 in-lb + 64.8 m-kg	133.9 in 3.40 m	16068 in-lb 183.6 m-kg
2 x D130-701-041 (LH and RH installation)	224 lb 102 kg	0.0 in 0.00 m	0 in-lb 0.0 m-kg	133.9 in 3.40 m	29994 m-kg 346.8 m-kg
D130-701-043 (LH installation)	130 lb 59 kg	- 47.4 in - 1.20 m	- 6162 in-lb - 70.8 m-kg	133.9 in 3.40 m	17407 in-lb 200.6 m-kg
D130-701-043 (RH installation)	130 lb 59 kg	+ 47.4 in + 1.20 m	+ 6162 in-lb + 70.8 m-kg	133.9 in 3.40 m	17407 in-lb 200.6 m-kg
2 x D130-701-043 (LH and RH installation)	235 lb 106.8 kg	0.0 in 0.00 m	0.0 in-lb 0.00 m-kg	133.9 in 3.40 m	31467 in-lb 363.1 m-kg
D130-701-013 (Fixed provisions)	25 lb 11.4 kg	0.0 in 0.00 m	0.0 in-lb 0.00 m-kg	133.9 in 3.40 m	3348 in-lb 38.8 m-kg

5. PARTS LIST

Qty -041	Qty -043	Qty -011	Qty -013	Part Number	Description
X				D130-701-041	HELI-UTILITY-BASKET
	X			D130-701-043	HELI-UTILITY BASKET
		X		D130-701-011	CONVERSION KIT
			X	D130-701-013	FIXED PROVISIONS KIT
2	2			*D2022-101	SPACER
1	1			*D2258-220	LABEL
1	1			*D2332-041	PROP ASSEMBLY
1	1			*D2512	BASKET LID ASSEMBLY
1	1			*D2530	HANDLE ASSEMBLY
2	2			*D2535	SPRING
2	2			*D2537	BUSHING
2	2			*D2931	BUMPER
1	1			*D3172-041	BASKET BASE ASSEMBLY
2				D3173-041	BEAM ASSEMBLY
1				D3177-041	BRACKET ASSEMBLY
1				D3177-043	BRACKET ASSEMBLY
1	1			D3180-041	STRUT ASSEMBLY, LH
1	1			D3180-042	STRUT ASSEMBLY, RH
1	1			D3181-1	BUSHING
	1	1	1	D4037-1	AFT CHANNEL
	1	1	1	D4037-3	FWD CHANNEL
	1	1	1	D4038-041	ANGLE ASSEMBLY, FWD, LH
	1	1	1	D4038-042	ANGLE ASSEMBLY, FWD, RH
	1	1	1	D4038-043	ANGLE ASSEMBLY, AFT, LH
	1	1	1	D4038-044	ANGLE ASSEMBLY, AFT, RH
	1	1		D4039-041	FWD BRACKET ASSEMBLY
	1	1		D4039-043	AFT BRACKET ASSEMBLY
	4	4	4	D4040-1	RADIUS BLOCK
	1	1		*D4090-1	PLACARD (ON BASKET LID)

• COPYRIGHT © 2002 BY DART AEROSPACE LTD. •
 THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
 OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: **E**

Date: 15.04.22